

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Astrid Elbe et al.

Application No.: 10/723,448

Confirmation No.: 5966

Filed: November 25, 2003

Art Unit: 2183

For: PROCESSOR WITH INTERNAL MEMORY
CONFIGURATION

Examiner: D. H. Pan

RESPONSE TO COMMUNICATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicants note that the term “cryptocoprocessor” in claim 1 has three limitations. The first limitation is that this is a processor rather than a whole computer system. The second limitation is that this processor is a co-processor. This means that the co-processor is a kind of an assistant device as it is known in the art of computer processors. A typical personal computer CPU includes a processor and for example an arithmetic coprocessor. The third limitation is that the coprocessor is a cryptocoprocessor, i.e., a coprocessor for performing cryptographic operations such as encrypting/decrypting, performing a digital signature or verifying a digital signature. Using memory for encryption and decryption does not anticipate the cryptoprocessor. See Office Action at 3.

Regarding these three limitations in the term “cryptocoprocessor”, the Examiner has pointed to items 100, 200, 300 in Fig. 4b. However, these three elements in Fig. 4b correspond to a “memory and disc hierarchy and the C-DIMM driver interface” as outlined in column 9, lines 66 and 67. This is described in detail with respect to the Fig. 1 prior art system architecture in column 2, lines 19 to 24. The computer hardware operating system

is made up by the CPU sub-system 100, the main memory sub-system 200 and the disc sub-system 300. Thus, the three sub-systems do not constitute a “processor” limitation. The CPU sub-system 100 might, at best, be considered a “processor.”

Thus, items 100, 200, 300 as indicated by the Examiner in section 4 of the Office Action do not constitute a “processor” but constitute a “computer hardware and software operating system hierarchy of present day computing systems” as indicated in column 2, lines 20 and 21.

Regarding the “co-processor” limitation, the Examiner has not acknowledged this limitation. The fact that the co-processor is not a stand-alone processor but a co-processor to a main processor has not at all been discussed by the Examiner and is also not disclosed in Dye.

Regarding the third limitation, i.e., the crypto feature, the Examiner states under section 5 of the Office Action, that this feature is not explicitly shown, although the Examiner points to column 19, lines 30 to 35. What is stated in column 19, lines 28 to 35 is that the C-DIMM element 550 may perform algorithms such as data encryption and decryption. However, item 550 is a device completely separate from devices 100, 200, 300 in Fig. 4b mentioned by the Examiner for the processor.

Importantly, claim 1 does not claim a processor and any additional crypto element. Instead, claim 1 claims a cryptocoprocessor, i.e., a processor characteristic and a cryptographic feature in this processor and, particularly, not just in a processor but a specific coprocessor.

One can, if at all, compare item 100, i.e., the “CPU sub-system” to the “cryptocoprocessor.” However, it becomes clear that any functionality in Dye described for

the C-DIMM device 550 cannot be attributed to a different device 100. Thus, the Examiner's reasoning is not logical.

At best, the cryptocoprocessor is the 550 C-DIMM module in Fig. 4a. However, this interpretation of Dye would not result in claim 1, since the C-DIMM device 550 does not have the other features in claim 1. Thus, based on the above, Applicants respectfully request withdrawal of the rejection and allowance of the pending claims.

Dated: April 3, 2008

Respectfully submitted,

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